Claims

1. Composite abrasive body comprising
at least one abrasive product support (1),
at least one abrasive product (2), where abrasive particles (3) are present on its surface,
as well as at least one cured adhesive (4), which bonds abrasive product support (1) and abrasive product (2) together,
characterized in that adhesive (4) is a two-component polyurethane or (meth)acrylate adhesive (4).

2. Composite abrasive body as in Claim 1, characterized in that abrasive particles (3) are present only on one side of abrasive product (2).

3. Composite abrasive body as in Claim 1 or Claim 2, characterized in that abrasive product (2) is a flap-shaped abrasive member.

4. Composite abrasive body as in Claim 3, characterized in that the flap-shaped abrasive member is constructed from at least one cloth or paper (101), at least one binder (102), and abrasive particles (3).

5. Composite abrasive body as in Claim 4, characterized in that the surface of abrasive particles (3) is partially surrounded by binder (102).

6. Composite abrasive body as in Claim 4 or Claim 5, characterized in that binder (102) is a polymer, in particular a reaction product based on polyepoxides or polyurethanes or polyphenols.

7. Composite abrasive body as in any one of the preceding claims, characterized in that abrasive product support (1) is a circular disc or a wheel or a belt.

8. Composite abrasive body as in Claim 7, characterized in that abrasive product (2) is bonded to abrasive product support (1) on the largest area surface of the disc or wheel or belt.

9. Composite abrasive body as in Claim 8, characterized in that abrasive product (2) is bonded to abrasive product support (1) in the radial direction of the disc or wheel.

10. Composite abrasive body as in Claim 7, characterized in that abrasive product (2) is bonded to abrasive product support (1) on the peripheral surface of the wheel or circular disc, in particular in a radial orientation.

11. Composite abrasive body as in any one of the preceding claims, characterized in that a plurality of abrasive products (2), disposed partially overlapping each other, are bonded to the abrasive product support (1).

12. Composite abrasive body as in any one of the preceding claims, characterized in that the polyurethane or (meth)acrylate adhesive is cured at a temperature between 10°C and 180°C, in particular between 20°C and 80°C, preferably between 20°C and 40°C, most preferably at room temperature.

13. Composite abrasive body as in any one of the preceding claims, characterized in that the cured two-component (meth)acrylate adhesive (4) is obtained by mixing two components, where
the first component of the adhesive contains at least one (meth)acrylate monomer, in particular selected from the group including isobornyl (meth)acrylate, tetrahydrofurfuryl (meth)acrylate, diethylene glycol di(meth)acrylate, epoxy (meth)acrylate (in particular as can be synthesized from (meth)acrylic acid and bisphenol-A diglycidyl ether, bisphenol-A diglycidyl ether oligomers, bisphenol-A or ethoxylated bisphenol-A), trimethylol tri(meth)acrylate, as well as mixtures thereof,
and
the second component contains at least one radical initiator, in particular an organic peroxide, preferably benzoyl peroxide.

14. Composite abrasive body as in any one of Claims 1 to 12, characterized in that the cured two-component polyurethane adhesive (4) is obtained by mixing two components,
where the first component of the adhesive contains at least one polyol or one polyamine,
and
the second component contains at least one polyisocyanate, in particular a polyurethane prepolymer, which can be synthesized from polyisocyanates, in particular selected from the group including 1,6-hexamethylene diisocyanate (HDI), 2,4- and 2,6-toluylene diisocyanate (TDI), 4,4'-diphenylmethane diisocyanate (MDI), 1-isocyanato-3,3,5-trimethyl-5-isocyanatomethylcyclohexane (= isophorone diisocyanate or IPDI), their isomers, as well as their mixtures, and polyols, in particular polyoxyalkylene polyols.

15. Use of a two-component (meth)acrylate adhesive consisting of a first component which contains at least one (meth)acrylate monomer, in particular selected from the group including isobornyl (meth)acrylate, tetrahydrofurfuryl (meth)acrylate, diethylene glycol di(meth)acrylate, epoxy (meth)acrylate (in particular as can be synthesized from (meth)acrylic acid and bisphenol-A diglycidyl ether, bisphenol-A diglycidyl ether oligomers, bisphenol-A or ethoxylated bisphenol-A), trimethylol tri(meth)acrylate, as well as mixtures thereof,
and
a second component, which contains at least one radical initiator, in particular an organic peroxide, preferably benzoyl peroxide,
in fabrication of a composite abrasive body as in any one of Claims 1 to 14, for bonding abrasive product support (1) and abrasive products (2).

16. Use of a two-component polyurethane adhesive consisting of a first component, which contains at least one polyamine or one polyol,
and
a second component, which contains at least one polyisocyanate, in particular at least one polyurethane prepolymer that can be synthesized from, in particular, at least one polyisocyanate and at least one polyol,
in fabrication of a composite abrasive body as in any one of Claims 1 to 14, for bonding abrasive product support (1) and abrasive products (2).

17. Use as in Claim 15 or Claim 16, characterized in that the adhesive has a pasty consistency.

18. Method for fabrication of a composite abrasive body as in any one of Claims 1 to 14, characterized in that it includes the following operations:
-Mixing the two components of a two-component polyurethane or (meth)acrylate adhesive
-Application of the mixed adhesive to abrasive product support (1)
-Making contact between the mixed adhesive and at least one abrasive product (2)
-Curing the adhesive.

19. Method as in Claim 18, characterized in that the mixing, application, contacting, and curing steps are carried out at a temperature between 10°C and 180°C, in particular between 20°C and 80°C, preferably between 20°C and 40°C, most preferably at room temperature.

20. Method as in Claim 18 or Claim 19, characterized in that the surface of abrasive product support (1) and/or abrasive product (2) undergo chemical or physical pretreatment before bonding.

21. Method as in any one of Claims 18 to 20, characterized in that the abrasive product is a flap-shaped abrasive member and that the latter is inserted into the mixed abrasive, applied to abrasive product support (1), essentially vertically with respect to the abrasive product support surface, so that part of the surface is covered by adhesive.

22. Method as in Claim 21, characterized in that a plurality of flap-shaped abrasive members abrasive products are inserted next to each other into the uncured adhesive and then are taken from an essentially vertical orientation to a tilted orientation.

23. Method as in Claim 22, characterized in that the flap-shaped abrasive members overlap in a fan-like or shingle-like fashion.